

## Vogtle 2

# 2Q/2013 Plant Inspection Findings

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## Initiating Events

**Significance:** G Mar 31, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

### **Inadequate Operations and Maintenance Procedures Results in High RCP Seal Leakoff Flow and Manual Reactor Trip**

Green A self-revealing non-cited violation (NCV) of 10 CFR 50 Appendix B Criterion V, "Instructions, Procedures, and Drawings" was identified for failure to provide adequate work instructions in the operations procedure used to change out the reactor coolant system (RCS) filter. Specifically, operations procedure 13213-1/2, "Backflushable Filter System," which is used to change out the RCS filter, did not provide adequate instructions and/or precautions to prevent excessive air intrusion (and the subsequent localized crud burst within the chemical and volume control system (CVCS) late in core life) when flushing and venting the RCS filter housing. The licensee conducted a root cause investigation and entered the event into their corrective action program (condition report (CR) 597293). The licensee immediately created a Standing Order for Operation of CVCS in relation to RCP seals, and revised procedure 13213-1/2, "Backflushable Filter System" to provide instructions to significantly reduce the amount of air intrusion from changing out the RCS filter.

The finding was more than minor because it was associated with the procedure quality attribute of the reactor safety - initiating events cornerstone and it adversely affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the failure to provide adequate work instructions to operations personnel resulted in a 'localized' crud burst at the reactor coolant pump (RCP) seals causing RCP seal leakoff flow rates to exceed administrative limits for continued pump operation and a subsequent manual reactor trip. Because the inspectors answered "No" to all of the IMC 0609 Appendix A (dated June 19, 2012) Exhibit 1, Section B, "Initiating Events Screening Questions," the inspectors concluded that the finding was of very low safety significance (Green). Since the inadequate procedures have existed since plant start-up, this violation is not indicative of current licensee performance and does not have an associated cross-cutting aspect assigned. (Section 1R11)

Inspection Report# : [2013002](#) (*pdf*)

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## Mitigating Systems

**Significance:** G Dec 31, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

### **Inadequate maintenance procedure results in inoperability of NSCW cooling tower fan**

A self-revealing non-cited violation (NCV) for failure to meet the requirements of 10 CFR Part 50 Appendix B, Criterion V, "Instructions, Procedures, and Drawings" was identified for failure to provide adequate work instructions in the maintenance procedure used to modify 480V EMAX safety-related switchgear breakers. Specifically, when modifying the breaker by adding a higher amperage closing coil, failure to verify the proper placement of the wire

bundle on top of the closing coil following replacement resulted in the safety-related 2A NSW cooling tower fan #3 480V EMAX breaker failing to close when demanded. The licensee replaced the failed breaker and returned the fan to operable status within 21.5 hours.

The finding was more than minor because it impacted the reactor safety mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences and affected the cornerstone attribute of equipment performance. Since the inspectors answered “No” to all of the IMC 0609.04 (dated June 19, 2012) Exhibit 2, section A, questions 1-4, mitigating systems cornerstone screening questions, the inspectors concluded that the finding was of very low safety significance (Green). The cause of this finding was related to the corrective action program component of the problem identification and resolution cross-cutting area due to less-than-adequate problem evaluation. [P.1(c)] Specifically, the licensee’s extent of cause evaluations performed on previous 480V EMAX breaker failures (caused by restricted movement of the close lever) did not identify the potential of the closing coil wire bundle to interfere with the proper movement of the close lever. The licensee’s corrective action to the 480V EMAX breaker issue was to revise the maintenance procedure used to perform maintenance on EMAX breakers (procedure 28480-C, 480V EMAX Breaker Maintenance), and then inspect all 480V EMAX breakers on site that had been modified with the higher amperage closing coil to verify that the wire bundles were not interfering with the operation of the close coil. The licensee entered this into their corrective action program as CR 549999 and CR 550736. (Section 1R19)

Inspection Report# : [2012005](#) (pdf)

**Significance:** G Jul 13, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to identify and repair an inoperable fire penetration seal**

An NRC-identified non-cited violation of Vogtle Unit 2, Operating License Condition 2.G, was identified for the licensee’s failure to identify and repair an inoperable fire penetration seal. The NCV was associated with the licensee’s failure to identify and repair Auxiliary Feedwater Pumphouse penetration seal 2-59-031-1 that was missing half of 1” damming board material on one side of the seal. The inoperable fire penetration seal is in a 3-hour fire rated wall of the Auxiliary Feedwater Pumphouse. The licensee took immediate corrective actions to declare the penetration seal inoperable, entered the issue in their corrective action program as CR 467932, established a continuous fire watch, and repaired the penetration seal to its design condition. Additionally, the licensee performed an extent of condition inspection of the Auxiliary Feedwater Pumphouse to verify that there were not any other penetration seals in the same degraded condition.

The inoperable fire penetration seal represented a performance deficiency, since the partial missing damming board would be expected to be identified and corrected by the licensee during performance of Procedure 29144-C, Fire Boundaries and Fire Rated Penetration Seals-18 Month Visual Inspection. The finding adversely affected the fire containment capability defense-in-depth element. The finding was determined to be more than minor because it was associated with the protection against external events attribute, (i.e., fire), and degraded the Mitigating Systems cornerstone objective to ensure the availability of systems that respond to initiating events. Using NRC IMC 0609, Appendix F, Fire Protection SDP Phase 1 Worksheet, the inspectors conducted a screening and determined the finding to be of very low safety significance (Green) because the remaining penetration seal depth and damming material provided at least 2-hours of fire resistance. The team identified a cross-cutting aspect in the resources component of the human performance area because the licensee did not ensure that personnel and procedures were available, and adequate to assure nuclear safety. Specifically, because the licensee did not identify any work activities that may have damaged the seal since the completion of the most recent inspection, it was reasonable to assume that the deficiency was missed during the surveillance performed on May 9, 2012. [H.2(c)] (Section 1R05.02)

Inspection Report# : [2012007](#) (pdf)

## Barrier Integrity

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## Emergency Preparedness

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## Occupational Radiation Safety

**Significance:**  Dec 31, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

### **Unauthorized entry into a high radiation area**

The inspectors identified a Green, self-revealing, Non-cited Violation of technical specification 5.7.1, “High Radiation Area”, for an unauthorized entry into a High Radiation Area (HRA). A maintenance worker entered a HRA in Unit 1 containment without being briefed on the radiological conditions. The licensee entered this issue into their corrective action program as CR 523976 and took immediate corrective actions including an outage work crew stand down.

This finding was more than minor because it was associated with the occupational radiation safety cornerstone attribute of human performance and adversely affects the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operation. The finding was evaluated using the occupational radiation safety significance determination process. The finding was not related to As Low As Reasonably Achievable (ALARA) planning, nor did it involve an overexposure or substantial potential for overexposure, and the ability to assess dose was not compromised. Therefore, the finding was determined to be of very low safety significance (Green). This finding involved the cross-cutting aspect of human performance, work practices [H.4.b] because the HRA event was a direct result of poor communications during the pre-job briefing and a lack of procedure adherence on the part of the maintenance worker. The licensee entered this issue into the Corrective Action Program (CAP) as CR 523976. (Section 2RS1)

Inspection Report# : [2012005](#) (*pdf*)

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## Public Radiation Safety

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## Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the [cover letters](#) to security inspection reports may be viewed.

## Miscellaneous

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